

Form PTO-1449 (Modified)

**INFORMATION DISCLOSURE STATEMENT BY APPLICANT**  
 (Use several sheets if necessary)

 Atty. Docket No.  
 1856-40401 (9948.0-02)

 Serial No.  
 10/706,880

 Applicant  
 Shuibo Xie et al.

 Filing Date  
 November 11, 2003

Group


**REFERENCE DESIGNATION U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
FW	AA	3752775	08/14/1973	Yamaguchi et al.	252	464	
	AB	4537873	08/27/1985	Kato et al.	502	242	
	AC	4585752	04/29/1986	Ernest	502	314	
	AD	4738946	04/19/1988	Yamashita et al.	502	303	
	AE	4793797	12/27/1988	Kato et al.	143	7	
	AF	4961786	10/09/1990	Novinson	106	692	
	AG	5837634	11/17/1998	McLaughlin et al.	501	127	
	AH	6399528	06/04/2002	Krell et al.	501	80	03/05/2001
	AE	2003/0032554	02/13/2003	Park et al.	502	302	05/13/2002

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	Translation	
							YES	NO

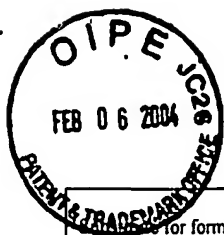
**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**


EXAMINER

DATE CONSIDERED

1/30/06

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP '609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.



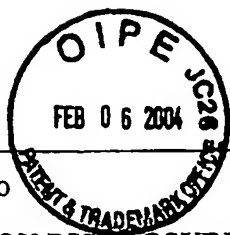
# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet		2	of	4	<b>Complete if Known</b>	
					<b>Application Number</b>	10/706,880
					<b>Filing Date</b>	November 12, 2003
					<b>First Named Inventor</b>	Shuibo Xie
					<b>Group Art Unit</b>	
					<b>Examiner Name</b>	
					<b>Attorney Docket Number</b>	1856-40401(9948.0-02)

## **OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate) title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issued number(s), publisher, city and/or country where published.	T <sup>2</sup>	
✓	AJ	Amato et al., <i>Sintering of Pelleted Catalysts for Automotive Emission Control</i> , pp. 187-197		
	AK	Arai et al., <i>Recent Progress in High-Temperature Catalytic Combustion</i> , Catalysis Today, 10 (1991) pp. 81-94		
	AL	Arai et al., <i>Thermal Stabilization of Catalyst Supports and their Application to High-Temperature Catalytic Combustion</i> , Applied Catalysis A: General 138 (1996) pp. 161-176		
	AM	Artizzu-Duart et al, <i>Catalytic Combustion of Methane on Substituted Barium Hexaaluminates</i> , Catalysis Today 59 (2000) pp. 163-177		
	AN	Beguin et al., <i>Stabilization of Alumina by Addition of Lanthanum</i> , Applied Catalysis 75 (1991) pp. 119-132		
	AO	Bish et al., <i>Quantitative Phase Analysis Using the Rietveld Method</i> , J. Appl. Cryst. (1998) 21, pp. 86-91		
	AP	Cai et al., <i>Atomic Scale Mechanism of the Transformation of <math>\gamma</math>-Alumina to <math>\alpha</math>-Alumina</i> , Physical Review Letters, Vol. 89, No. 23, (12/02/2002) pp. 235501-1 – 235501-4		
	AQ	Chen et al., <i>High Temperature Thermal Stabilization of Alumina Modified by Lanthanum Species</i> , Applied Catalysis A: General 205 (2001) pp. 159-172		
	AR	Dexpert-Ghys, <i>Optical and Structural Investigation of the Lanthanum <math>\beta</math>-Alumina Phase Doped with Europium</i> , Journal of Solid State Chemistry 19, (1976) pp. 193-204		
	AS	Farrington et al., <i>The Lanthanide <math>\beta''</math> Alumina</i> , Applied Physics A 32 (1983) pp. 159-161		
	AT	Groppi et al., <i>Preparation and Characterization of Hexaaluminate-Based Materials for Catalytic Combustion</i> , Applied Catalysis A: General, 104 (1993) pp. 101-108		
	AU	Jang et al., <i>Catalytic Oxidation of Methane Over Hexaaluminates and Hexaaluminate-Supported Pd Catalysts</i> , Catalysis Today 47 (1999) pp. 103-113		
	AV	Johansson et al., <i>Development of Hexaaluminate Catalysts for Combustion of Gasified Biomass in Gas Turbines</i> , Journal of Engineering for Gas Turbines and Power, Vol. 124 (04/2002) pp. 235-238		
	AW	Kato et al., <i>Preparation of Lanthanum <math>\beta</math>-Alumina with High Surface Area by Coprecipitation</i> , Journal of the American Ceramic Society, 70 [7] (07/1987) pp. C-157-159		
✓	AX	Levy et al., <i>The Effect of Foreign Ions on the Stability of Activated Alumina</i> , Journal of Catalysis 9 (1967) pp. 76-86		
Examiner Signature			Dated Considered	1/30/06



Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		<b>Complete if Known</b>			
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		First Named Inventor	Shuibo Xie		
		Group Art Unit			
		Examiner Name			
Sheet	3	of	4	Attorney Docket Number	1856-40401(9948.0-02)

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Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate) title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issued number(s), publisher, city and/or country where published.	T <sup>2</sup>
MW	AY	Liu et al., <i>Partial Oxidation of Methane over Nickel Catalysts Supported on Various Aluminas</i> , Korean Journal of Chemical Engineering 19 (5) pp. 735-741 (2002)	
	AZ	Liu et al., <i>Partial Oxidation of Methane over Ni/Ce-ZrO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub></i> , Korean Journal of Chemical Engineering 19(5) pp. 742-748 (2002)	
	BA	Machida et al., <i>Effect of Additives on the Surface Area of Oxide Supports for Catalytic Combustion</i> , Journal of Catalysts 103 (1987) pp. 385-393	
	BB	Machida et al., <i>Analytical Electron Microscope Analysis of the Formation of BaO – 6Al<sub>2</sub>O<sub>3</sub></i> , Journal of American Ceramic Society 71[12] pp. 1142-47 (1988)	
	BC	Machida et al., <i>Effect of Structural Modification on the Catalytic Property of Mn-Substituted Hexaaluminates</i> , Journal of Catalysis 123 (1990) pp. 477-785	
	BD	Matsuda et al., <i>8th International Congress on Catalysis Volume IV: Impact of Surface Science on Catalysis Structure-Selectivity/Activity Correlations New Routes for Catalyst Synthesis (pp. IV-879-889)</i>	
	BE	Miao et al., <i>Partial Oxidation of Methane to Syngas over Nickel-Based Catalysts Modified by Alkali Metal Oxide and Rare Earth Metal Oxide</i> , Applied Catalysts A: General 154 (1997) pp. 17-27	
	BF	Nair et al., <i>Pore Structure Evolution of Lanthana-Alumina Systems Prepared through Coprecipitation</i> , Journal of American Ceramic Society 83[8] (2000) pp. 1942-1946	
	BG	Oudet et al., <i>Thermal Stabilization of Transition Alumina by Structural Coherence with LnAlO<sub>3</sub> (Ln = La, Pr, Nd)</i> , Journal of Catalysis 114, (1998) pp. 112-120	
	BH	Rahkeev et al., <i>Transition Metal Atoms on Different Alumina Phases: The Role of Subsurfaces Sites on Catalytic Activity</i> , Physical Review B 67, 115414 (2003) pg. 4	
	BI	Rietveld, <i>A Profile Refinement Method for Nuclear and Magnetic Structures</i> , Journal of Appl. Cryst. (1969) 2, pp. 65-71	
	BJ	Roh et al., <i>Partial Oxidation of Methane over Ni/0-Al<sub>2</sub>O<sub>3</sub> Catalysts</i> , Chemistry Letters 2001 (pp. 666-667)	
	BK	Santos et al., <i>Standard Transition Aluminas, Electron Microscopy Studies</i> , Materials Research, Vol. 3 No. 4 (2000) pp. 104-114	
	BL	Schaper et al., <i>The Influence of Lanthanum Oxide on the Thermal Stability of Gamma Alumina Catalyst Supports</i> , Applied Catalysis 7 (1983) pp. 211-220	
	AM	Schaper et al., <i>Thermal Stabilization of High Surface Area Alumina</i> , Solid State Ionics 16 (1985) pp. 261-266	
✓	AN	Seo et al., <i>Experimental and Numerical Studies on Combustion Characteristics of a Catalytically Stabilized Combustor</i> , Catalysis Today 59 (2000) pp. 75-86	
Examiner Signature			Dated Considered 1/30/06



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PH	BO	Russell et al., <i>Thermal Transformations of Aluminas and Alumina Hydrates</i> , Industrial and Engineering Chemistry Vol. 42, No. 7 (1950) pp. 1398-1403		
	BP	Subramanian et al., <i>Characterization of Lanthana/Alumina Composite Oxides</i> , Journal of Molecular Catalysts, 69 (1991) pp. 235-245		
	BQ	Taylor, <i>Computer Programs for Standardless Quantitative Analysis of Minerals Using the Full Powder Diffraction Profile</i> , Powder Diffraction, Vol. 6, No. 1 (1991) pp. 2-9		
	BR	Tietz et al., <i>Investigations on Lanthanide-ion-exchanged <math>\beta</math> and <math>\beta''</math>-Alumina</i> , Journal of Alloys and Compounds, 192 (1993) pp. 78-80		
	BS	Tijburg et al., <i>Application of Lanthanum to Psuedo-Boehmite and <math>\gamma</math>-Al<sub>2</sub>O<sub>3</sub></i> , Chapman and Hall (1991) pp. 6479-6486		
	BT	Weng et al., <i>Mechanistic Study of Partial Oxidation of Methane to Syngas Using In Situ Time-Resolved FTIR and Microprobe Raman Spectroscopies</i> , The Chemical Record Vol. 2, pp. 102-113 (2002)		
	BU	Wu et al., <i>Coupled Thermodynamic-Phase Diagram Assessment of the Rare Earth Oxide-Aluminium Oxide Binary Systems</i> , Journal of Alloys and Compounds, 179 (1992) pp. 259-287		
↓	BV	Zhou et al., <i>Structures and Transformation Mechanisms of the <math>n</math>, <math>y</math> and <math>0</math> Transition Aluminas</i> , International Union of Crystallography (1991) pp. 617-630		
Examiner Signature	Paul Watters		Dated Considered	1/30/06

**INFORMATION DISCLOSURE STATEMENT BY APPLICANT**  
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 Atty. Docket No.  
 1856-36301  
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 Shuibo Xie et al.

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**REFERENCE DESIGNATION U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
<i>W</i>	AA	6,277,894	08/21/01	Agee et al.	518	700	
<i>W</i>	AB	6,447,745	09/10/02	Feeley et al.	423	648.1	

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	Translation	
							YES	NO

**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

<i>W</i>	AC	Search Report for Appl. No. PCT/US03/36055, dated 23/06/04 (2 p.)

EXAMINER

*Paul Hottel*

DATE CONSIDERED

*4/30/06*

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